Environmental Protection Agency
Science Advisory Board

Human Health Research Strategy Review Panel

Introductory Panel Information

This document contains a summary statement prepared by each Panelist in order to introduce them and give an overview of their background and experience.

Dr. James Klaunig (Chair): Dr. Klaunig is Professor of Toxicology and Director of Toxicology in the Department of Pharmacology and Toxicology at Indiana University School of Medicine. He also serves as the Director of the Department of Toxicology for the State of Indiana. He received his BS degree from Ursinus College in Collegeville Pa., an MA from Montclair State University, Montclair, NJ, and his PhD from the University of Maryland in Baltimore, MD. He is the recipient of numerous awards including fellow of the Academy of Toxicological Sciences, the Otis R. Bowen, M.D. Distinguished Leadership Award, Indiana University School of Medicine and the Kenneth P. DuBois Award, and Midwest Society of Toxicology. He serves on several toxicology and pathology editorial boards including as associate editor of Toxicological Sciences. He has published over 150 peer-reviewed manuscripts in the field of toxicology and carcinogenesis. Since January 2000 he has been a Member, NIH National Toxicology Program Board of Scientific Counselors. He also has served as president of the carcinogenesis specialty section, president of the Ohio valley Society of Toxicology chair of the education committee, and finance committee member of the society of toxicology. He is currently the Treasurer- elect of the Society of Toxicology. He also serves the State of Indiana on the Indiana Pesticide review Board, the Governor's Council on Impaired and dangerous driving and on the Indiana Controlled substances Advisory Board. He has trained over 50 graduate students and postdoctoral fellows. His research interests are dedicated to understanding the mechanisms of chemically induced carcinogenesis specifically the mode of action of nongenotoxic carcinogens, role of oxidative stress in carcinogenesis and cell injury, and understanding of the multistage nature of the cancer process. His current research support includes the following grants: Xenobiotic Modulation of Hepatic Gene Expression by Oxidative Stress (NIEHS,); Potential Mechanisms for Rodent Liver Toxicity by 2-Butoxyethanol (American Chemistry Council); Studies on the Mechanisms of 1,3-Dichloropropene Induced Rodent Hepatic and Pulmonary Toxicity (Dow Chemical Co); Chemical Testing for Intoxication (State of Indiana); Forensic Toxicology Instrument Upgrade for Indiana (NHTSA/State of Indiana); Law Enforcement Drug and Alcohol Detection Training (State of Indiana).

Dr. Paul Blanc: Dr. Blanc is Professor of Medicine and Endowed Chair in Occupational and Environmental Medicine at the University of California San Francisco where he serves as Chief of the Division of Occupational and Environmental Medicine. He has been on the faculty at UCSF since 19888. In 1987 – 1988 he was a Fulbright Senior Research Scholar at Ben Gurion University of the Negev, Beer Sheva, Israel and in 1985 – 1987 a Robert Wood Johnson Clinical Scholar at the University of California San Francisco, He completed his residency in Internal and Occupational Medicine at Cook County Hospital, Chicago. He holds an MD from Albert Einstein College of Medicine and an MSPH in Environmental Health Sciences and Industrial Hygiene from the Harvard School of Public Health. He received his BA from Goddard College (Plainfield, Vermont).

Dr. Blanc is a Fellow of the American College of Chest Physicians and a member of the Western Society for Clinical Investigation. He currently serves as a member of the Safety and Occupational Health Study Section, NIH and of the Scientific Review Panel on Toxic Air Contaminants, California Air Resources Board. He also serves Associate Medical Director, California Poison Control System, San Francisco Division. He has authored or co-authored numerous scholarly publications in the field of occupational and environmental health.

Dr. James Gibson: Dr. Gibson is a Research Professor of Pharmacology and Toxicology at The Brody School of Medicine at East Carolina University in Greenville, NC since July 1, 2002 and Fellow, Academy of Toxicological Sciences. Previously, Dr. Gibson was Global Leader, for the Health, Environmental Sciences and Regulatory Functions for Dow AgroSciences. He was Director of Research and Development for North America and Global Director of Regulatory, Toxicology and Environmental Affairs for DowElanco and Director of Toxicology Affairs for the Dow Chemical Company. From 1976-1989 Gibson was Vice President and Director of Research for the Chemical Industry Institute of Toxicology and established the scientific staff and research programs from the inception of this independent, non-profit research institute. He started his career in 1969 at Michigan State University where he was a professor in the Department of Pharmacology through 1976 and a visiting professor at the Pharmakologishes Institut, der Universitat Mainz in Mainz, Germany in 1975 and 1976. Dr. Gibson received his B.A. from Drake University and his M.S. and Ph.D. degrees in Pharmacology from the University of Iowa and completed the Executive Program in the Graduate School of Business Administration at the University of North Carolina at Chapel Hill. He is a recipient of the Alexander von Humboldt Senior U.S. Scientist Award and the Society of Toxicology Achievement Award. He is currently an adjunct professor at Indiana University School of Medicine, Purdue University School of Pharmacy, and North Carolina State University Department of Toxicology. Gibson has served in various capacities on a number of professional and government advisory panels. He has served as a member of the board of directors for the Academy of Toxicological Sciences, president of the Society of Toxicology, associate editor, *Toxicology and Applied Pharmacology*, secretary-general of the International Union of Toxicology, president of the North Carolina Society of Toxicology, the scientific review panel for the National Library of

Medicine, member of the joint Science Advisory Board/Science Advisory Panel Review Panel for Endocrine Disruption Screening and Testing Advisory Committee and, currently, as a member of the Food Quality Protection Act Board, and the editorial board for *Archives of Toxicology,* among others. He has authored over 100 publications. Gibson's research interests are in developing and evaluating *in vitro* methods for the safety assessment and exposure assessment of products of biotechnology. Applications for funding are pending.

Dr. Michael Jayjock: Dr. Jayjock is a Senior Research Fellow at the Rohm and Haas Company. He holds an M.S. and Ph.D. from Drexel University. Dr. Jayjock's areas of expertise include: human exposure assessment (specifically modeling contaminant emission source-strength as a function of time, transport and fate indoors); human health risk assessment, integration of estimated dermal and inhalation exposure and dose with estimates of health risk per unit exposure. Dr. Jayjock's research activities include: sources/sinks and backpressure concentration model development for compounds released indoors; and development of techniques for measuring and modeling air-to-lungs, surface-to-skin and air-to-skin exposure. Dr. Jayjock served on the EPA Science Advisory Board's Integrated Human Exposure Committee (IHEC), the National Research Council, Committee on Advances in Assessing Human Exposure to Airborne Pollutants; the National Research Council, Committee on Toxicology – Subcommittee on Risk Assessment of Flame-Retardant Chemicals; and is a member and former Chair of the Human Health Exposure Technical Implementation Panel of the Long Term Research Initiative of the American Chemistry Council. He was on the Program Scientific Peer Review Team, US Environmental Protection Agency, National Exposure Research Laboratory (NERL), Research Triangle Park, NC. His sole support for his research is from the Rohm and Haas Company.

Dr. George Lambert: Dr. Lambert is an Associate Professor of Pediatrics and Associate Director of the Clinical Research Center at the UMDNJ-Robert Wood Johnson Medical School. He holds a MD degree from the University of Illinois and has had post graduate training in: Clinical Research in Neonatology, has been an Intern and Resident at the Harriett Lane Home, Johns Hopkins Hospital, Baltimore, Md, He was also a Pharmacology Fellow at Children's Hospital of Philadelphia, PA. Dr. Lambert is certified by the American Board of Pediatrics, 1979 & 1980; Neonatal/Perinatal Medicine, 1980 and as an Instructor, Neonatal Resuscitation, 1989

Dr. Lambert is a member of the Environmental and Occupational Health Sciences Institute (EOHSI), UMDNJ-Robert Wood Johnson Medical School and an Adjunct Associate Professor of Pharmacy in the College of Pharmacy of Rutgers, The State University of New Jersey. He is also a member of the Cancer Institute of New Jersey, and Director of the Center for Child and Reproductive Environmental Health, Director, NIH / USEPA Center for Childhood Neurotoxicology and Exposure Assessment, and the Director, Pediatric Clinical Research Center, UMDNJ- Robert Wood Johnson Medical School.

Dr. Lambert has served as a consulting expert to a number of professional and governmental organizations including: the Neuropharmacology Division of FDA, the U.S. Congress, TSCA Interagency Testing Committee, Department of Energy, Oakridge National Laboratory, Division of Chemical Assessment, Office of Orphan Products Development, FDA; NICHD's National Neonatal Collaborative Project. He is a Member, Committee on Drugs, American Academy of Pediatrics, (National Committee), a Member - Human Health Effects Committee of the Joint (U.S. and Canadian) Commission on the Great Lakes, a consultant to the World Health Organization, Environmental Toxicology in Children. He has served on a number of US EPA Science Advisory Board panels including the Dioxin Reassessment Panel. Dr. Lambert is a Fellow of the American Academy of Pediatrics

Dr. Lambert's grants include: Since 1998: New York Health Department NIEHS Award; NIEHS/US EPA Superfund Center, Co-Investigator - Mohawk Project; NIEHS Center of Excellence (M. Gallo, PI); NIEHS training Grant in Toxicology (K Reuhl, PI); US EPA - Effect of in utero exposure to PCB's on Sexual Maturation' NJ DHHS / CDC - Hypospadism and Xenoestrogen exposure in humans; NIEHS- Pharmacogenetics of environmental chemical related toxicities (JY Hung, PI); Cancer Commission of New Jersey – Effects of Herbal products on sex hormone synthesis and metabolism; NJ Department of Environmental Protection – Effects of Eating Newark crabs on human health; NIEHS / USEPA Children Center for Environmental Health and Disease Prevention- Center for Childhood Neurotoxicology and Exposure Assessment; NCI Program Project: Tea Cancer Chemoprevention (PI CS Yang); NIEHS – The Effects of World Trade Center on human health (PI M. Gallo --Dr Lambert's Project: The effects of WTC on Reproductive Outcome.)

Dr. Joseph Landolph: Dr. Landolph, Jr., is Associate Professor of Molecular Microbiology and Immunology and Pathology and a Member of the USC/Norris Comprehensive Cancer Center in the Keck School of Medicine, and Associate Professor of Molecular Pharmacol-ogy and Toxicology in the School of Pharmacy, at the University of Southern California (USC) in Los Angeles, California. Dr. Landolph received his B. S. degree in Science, majoring in Chemistry, from Drexel University in Philadelphia, Pennsylvania, and a com-mission as a second lieutenant in the U. S. Army reserve from ROTC training at Drexel University. He received his Ph. D. degree in Chemistry (Physical Chemistry) from the University of California at Berkeley under Professor Melvin Calvin (Member of the U. S. National Academy of Sciences, Nobel Laureate). At U. C. Berkeley, Dr. Landolph stud- ied the cytochrome P450-mediated metabolism of the carcinogen benzo(a)pyrene (BaP) to cytotoxic and carcinogenic metabolites and molecular mechanisms of BaP-mediated cyto- toxicity and morphological transformation in mouse liver epithelial cells and fibroblasts. He performed postdoctoral training in Chemical Carcinogenesis under Professor Charles Heidelberger (Member of the U. S. National Academy of Sciences) at the USC Compre-hensive Cancer at the School of Medicine of the University of Southern California. Dr. Landolph is the recipient of numerous awards, including an undergraduate National

Sciences Foundation Research Traineeship, the Superior Cadet Award (U. S. Army ROTC), the Merck Award in Chemistry, an American Cancer Society postdoctoral fellowship, the ICI Traveling Lectureship Award, and the Cleland Award for Excellence in Teaching from the Dept. of Pathology at USC. Dr. Landolph has served as a member of the Editorial Boards of Cancer Biochemistry Biophysics and Environmental and Molecular Mutagenesis, and frequently reviews scientific manuscripts for Carcinogenesis, Molecular Carcinogenesis, Environmental Health Perspectives, Cancer Research, and Chemical Research in Toxicolo- gy. He has published thirty-two peer reviewed manuscripts and fifteen review articles/-book chapters on chemical carcinogenesis, genetic toxicology, and molecular oncology. He has served as a counselor of the Carcinogenesis Specialty Section of the American Society of Toxicology, and as Vice President Elect, Vice President, and President-Elect of the Metals Specialty Secton of the American Society of Toxicology. He is currently President of the Metals Specialty Section of the American Society of Toxicology. Dr. Landolph has served for the last eight years and currently serves as a member of the Carcinogen Iden- tification Committee of the Scientific Advisory Board of the Office of Environmental Health Hazard Assessment of the State of California, as appointed by two successive Governors of California. He has also served as an ad hoc member of the Chemical Pathology Study Section and the AlTX4 Study Section of the NIH, as a member of the Health Effects Re-view Paenl of the U. S. EPA, as a reviewer of special RFAs for the NIEHS, as a reviewer of Center Grants for the NIEHS and EPA, and as a reviewer of Ph. D. fellowships for the NIH and for the Howard Hughes Fellowship Program of the National Research Council. He has also served as an external adviser for the Center for Clean Technology and the Cli-nical Nutrition Unit at the University of California at Los Angeles. He has trained nine Ph. D. students and thirty postdoctoral fellows. His research interests are in understanding the molecular biology of chemical carcinogenesis and human cancer. His laboratory specific-ally studies the molecular mechanisms, cell biology, and molecular biology of morphologi- cal and neoplastic transformation induced in cultured cells by insoluble nickel compounds, hexavalent chromium compounds, polycyclic aromatic hydrocarbons, and arsenic com-pounds. His current research support includes the following grant: Evaluation of the Rel-ative Genotoxic Potentials of Four Nickel Samples by Short-Term Assays in C3H/10T1/2 Mouse Embryo Cells. His prior research support was from the NCI, the NIEHS, the EPA, the Tobacco Related Disease Research Program of the State of California, and the Nickel Producers Environmental Research Association. His current funding source is the Nickel Producers Environmental Research Association. Dr. Landolph is also a private, part-time consultant in Chemical Toxicology, Chemical Carcinogenesis, and Human Cancer.

Dr. Steve Lewis: Dr. Lewis holds a B.A. in Chemistry from Indiana University at Indianapolis (1970) and a Ph.D. in Toxicology (minor in Biomedical Sciences) from Indiana University School of Medicine (1975). Dr. Lewis joined Exxon Corporation in 1975 and has held various technical, consulting and management positions, including Manager of the Petroleum and Synthetic Fuels Group. His research and safety assessment activities have focused on the assessment of potential health risks from exposure to chemical carcinogens, toxicants to the nervous system, and chemical hazards

to reproductive health. As a Distinguished Scientific Associate, Dr. Lewis acts as a corporate advisor on scientific and science-policy issues in the areas of occupational and environmental health. Dr. Lewis received Exxon Biomedical Sciences' Exceptional Achievement Award in 1993 and consecutive ExxonMobil Ambassador Awards in 2001 and 2002. Dr. Lewis has been a Diplomate of the American Board of Toxicology since the Board's inception in 1980 (recertified in 1985, 1990, 1995 and 2000). He has served on the editorial boards of 5 scientific journals (4 are current) and was recently appointed Associate Editor for a new journal, Nonlinearity in Biology, Toxicology and Medicine. Dr. Lewis is active in a variety of professional societies, including the Society for Risk Analysis (elected to SRA's governing Council in 2000), the International Society for Regulatory Toxicology and Pharmacology, and the Society of Toxicology. Dr. Lewis has served as a Consultant to the U.S. EPA Science Advisory Board, and is a Member of the Risk Communication Subcommittee of the EPA Board of Scientific Counselors (of the Office of Research and Development). He is a frequent commentator on scientific and regulatory issues before U.S., state and international agencies. He is a Past-Chair of the American Petroleum Institute's Toxicology Committee, and a former member of the Board of Directors of the Toxicology Forum. Dr. Lewis has served as Chair of the American Industrial Health Council's Science Policy Committee. He currently serves as Chair for a chemical-industry-wide research cooperative to improve risk assessment methods for the American Chemistry Council (formerly, the Chemical Manufacturers Association). Dr. Lewis was recently re-appointed for a second 3-year term on the Board of Trustees of TERA/ITER (a not-for-profit organization specializing in the assessment of health and environmental risks). Dr. Lewis also holds the title of Senior Fellow at the Cecil and Ida Green Center for the Study of Science and Society (University of Texas at Dallas), where he was a visiting scholar in 1995. Dr. Lewis is a nominee to the position of Adjunct Professor of Environmental and Community Medicine at the University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School. Dr. Lewis has published and presented the results of his work widely, and has delivered numerous invited seminars and other presentations.

Randy Maddalena: Randy Maddalena, Ph.D., is a Scientist with the Environmental Energy Technologies Division at Lawrence Berkeley National Laboratory. The general focus of his research is the development, evaluation and application of models that predict chemical fate in multiple environmental media (air, water, soil, vegetation, sediment) and analysis of chemical exposures through multiple pathways (drinking water, food, feed, indoor air) for both human and ecological receptors. He received his bachelor's degree in Environmental Toxicology (1992) and his Ph.D. in Agricultural and Environmental Chemistry (1998) from the University of California, Davis. He is Co-chair of the Society of Environmental Toxicology and Chemistry (SETAC) Advisory Group on Fate and Exposure Modeling and has served as Editor of the Fate and Exposure Modeling column in the SETAC Globe. His most recent work combines the use of models and experimental data to investigate the role of plants in the environmental fate and transport of semivolatile organic pollutants and how the uptake of these pollutants into ecological or agricultural food chains might contribute to dietary exposures. Another area of his research includes probabilistic exposure and risk assessment where he develops methods for constructing exposure factor distributions and recently proposed a framework for

regulators to use when reviewing PRAs. His current research support includes the following: A Multi-Domain Framework for Integrating Models and Measurements of Multimedia Environmental Contaminants (U.S. EPA, National Exposure Research Laboratory); Improving Science-Based Methods for Assessing Risks Attributable to Petroleum Residues Transferred from Soil to Vegetation (U.S. DOE, Fossil Energy Research); Integrated Transport and Human Health and Ecological Risk Assessments For Multimedia Pollutants (U.S. EPA, Office of Air Quality Planning and Standards); Criteria for Evaluation and Development of Probability Density Functions for a Set of Human Exposure Factors (U.S. EPA, Office of Emergency and Remedial Response).

Maria Morandi: Dr. Maria T. Morandi is an Assistant Professor of Environmental Sciences and Occupational Health at the School of Public Health of the University of Texas – Houston Health Science Center. She served as member of the Integrated Human Exposure Assessment Committee (formerly the Indoor Air and Total Human Exposure Assessment Committee) of the EPA Science Advisory Board during 1992 and 1998, and has served as a member of the Research Strategies Advisory Committee since 1998. Dr. Morandi has also served as member or chair of several EPA program review panels, the Agency for Toxic Substances Board of Scientific Councilors, and the National Institute of Occupational Health Study Section. .

Dr. Morandi's areas of research interest include development of sampling and analytical methods for indoor, outdoor and personal monitoring of air pollutants in community and work environments, exposure assessment, exposure modeling, and health effects from exposure to airborne contaminants and related cellular and molecular mechanisms of action. She is also certified in the practice of industrial hygiene by the American Board of Industrial Hygiene. Dr. Morandi received a BS degree in Chemistry form the City College of New York in 1978. She received M.S. and Ph.D. degrees in Environmental Health from the Norton Nelson Institute of Environmental Medicine of New York University Medical Center in 1982 and 1985.

Beate Ritz: Dr. Ritz is an Associate Professor in the Department of Epidemiology and Center for Occupational and Environmental Health (COEH) at the School of Public Health in the University of California, Los Angeles. She received her first Masters and Doctorate degrees in Medicine and Medical-sociology at the University of Hamburg, Germany. Her later MPH and Ph.D. in the field of Epidemiology were received from the University of California, Los Angeles. Over the last seven years, Dr. Ritz has dedicated her time and experience to train graduate and postdoctoral students. She has published numerous peer-reviewed reports and articles discussing a wide variety of environmental and occupational health related issues from the effects of radiation and chemical exposures on cancer mortality in nuclear workers to the effects of ambient air pollution on fetal development. Other publications and NIH funded research projects reflect Dr. Ritz's interest in studying suspected environmental risk factors for Parkinson's disease. Her ongoing research include the topics of Parkinson's disease susceptibility genes and pesticide exposures; the evaluation and validation of pesticide use reporting in California;

the evaluation of the impact of radiation and some known animal carcinogens on cancer mortality and morbidity in nuclear workers; the effects of traffic-related air pollution and adverse birth outcomes; and most recently a survey to identify and reduce musculoskeletal work hazards in garment workers. Her current research support and funding sources include the following: NIEHS; NINDS; NIOSH; CDC and ATSDR; California Cancer Research Program; UC Toxic Substances Research & Teaching Program; UCLA Institute of Labor And Employment; the Alzheimer's Association and the American Parkinson's Disease Association.

Herbert Rosenkrantz: Dr. Rosenkranz is a Professor of Environmental and Occupational Health and of Pharmacology at the University of Pittsburgh and a Research Professor of Biomedical Sciences at Florida Atlantic University. Until recently he was also Chair of the Department of Environment and Occupational Health and Interim Dean of the Graduate School of Public Health at the University of Pittsburgh. Previously he held professorships and departmental chairmanships at the College of Physicians and Surgeons of Columbia University, New York Medical College and the School of Medicine of Case Western-Reserve University. He has published over 570 papers in the areas of molecular biology, toxicology, carcinogenesis, and public health. He has served on national (NIH, EPA) and international (WHO, IARC, EU) panels and editorial boards. He is currently funded by NIH and DoD.

Robert Spengler: Dr. Spengler is the Associate Administrator for Science at the Agency for Toxic Substances and Disease Registry (ATSDR) in Atlanta, Georgia. He received his BS degree from George Washington University in Washington, D.C., and his ScD from the Johns Hopkins University School of Hygiene and Public Health in Baltimore, Maryland. His career as an epidemiologist has included faculty positions at McGill University, University of Toronto, University of Vermont, Southern Illinois University and University of Chicago. He has held senior epidemiologist positions at the Ontario Cancer Treatment and Research Foundation, Illinois Department of Public Health and Vermont Department of Public Health. Since 1991, he has worked at ATSDR as the Assistant Director for Science, Division of Health Studies and in 1998 began his current position as senior scientist at ATSDR. His research interests are dedicated to the field of environmental epidemiology and include methodology, surveillance, cancer, birth defects, exposure assessment, and exposure-outcome relationships. He oversees the agency's portfolio of intramural and extramural research and developed the ATSDR Agenda for Public Health Environmental Research 2002-2010. The six focus areas of ATSDR's applied human research program include exposure assessment, chemical mixtures, susceptible populations, community and tribal initiatives, evaluation and surveillance of health effects, and health promotion and intervention. He is the Executive Secretary for the ATSDR Board of Scientific Counselors and serves on numerous committees and working groups affiliated with CDC, EPA and NIEHS. He manages an office under the Assistant Administrator which monitors and maintains high quality science and research conducted or supported by ATSDR

Bernard Weiss: Dr. Weiss is Professor of Environmental Medicine and Pediatrics at the University of Rochester School of Medicine and Dentistry, where he has been a member of the faculty since 1965. He received his BA degree from New York University and his PhD from the University of Rochester. Before joining the faculty at Rochester, he served on the faculty of the Johns Hopkins School of Medicine, and, earlier, held an appointment at the U.S. Air Force School of Aviation Medicine. Dr. Weiss has served as a member of many committees and panels devoted to toxicology and environmental health, including those organized by the U.S. Environmental Protection Agency's Science Advisory Board (such as the Dioxin Reassessment Review Panel and the Subcommittee on Human Testing of Pesticides), and the National Academy of Sciences (for example, the recent Committee on Air Quality in Passenger Aircraft). He is especially concerned with risk assessment issues arising from the effects of environmental chemicals on brain development and brain aging. He is the editor or co-editor of seven books and monographs and author or co-author of over 200 articles. Dr. Weiss ‘s special interests and publications lie primarily in areas that involve chemical influences on behavior; these include the neurobehavioral toxicology of metals such as lead, mercury and manganese; endocrine disruptors such as dioxin; solvents such as toluene and methanol; drugs such as cocaine; and air pollutants such as ozone. In 1986 he was named
Scientist of the Year by the Learning Disabilities Association of America, and, in 1990, was awarded the Stokinger Prize by the American Conference of Governmental Industrial Hygienists (ACGIH). Dr. Weiss has served as president of several organizations in the area of neurotoxicology and also serves as a member of several public advisory groups. He also lectures frequently to lay audiences. His current and
recent grant support have been provided by NIH (specifically, the National Institute of Environmental Health Sciences) and ATSDR (Agency for Toxic Substances and Disease Registry).